UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/474,191	12/29/1999	TADAO MORISHITA	49376(868)	1975

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EXAMINER
CHANG, JON CARLTON

ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _16 June 2003 and 10 July 2003_ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _2,3 and 5-9_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _3,5,6,8 and 9_ is/are allowed.

6)☒ Claim(s) _2 and 7_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _29 December 1999_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _10_ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Response to Applicants' Amendment and Arguments

1.   The amendment filed June 16, 2003, has been entered and made of record.

With regard to the objection to an amendment under 35 U.S.C. § 132 for

introducing new matter into the disclosure, and the rejection of claim 3 under 35 U.S.C.

§ 112, first paragraph, Applicant's arguments have been fully considered, and are

persuasive. Therefore, the objection and rejection are therefore withdrawn.

In response to the amendment to claim 9, the rejection of that claim under 35

U.S.C. § 112, second paragraph, is withdrawn.

In light of Applicants' remarks regarding the objection to claim 8 under 37 CFR

1.75 as being a substantial duplicate of claim 5, and after further review of both claims,

the objection is withdrawn.

Applicant's arguments regarding claim 2 have been fully considered, but they are

deemed to be moot in view of the new grounds of rejection.

This action is nonfinal.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over

the article, "Automatic Extraction of Filled Information from Bankchecks" by Koerich et

al. (hereinafter "Koerich 1"), in combination with the article, "A System for Automatic

Extraction of the User-Entered Data from Bankchecks" by Koerich et al. (hereinafter

"Koerich 2").

       With regard to claim 2, Koerich 1 discloses an image processing apparatus (note

the system in Fig.4, and reference to "machine understanding" in Section 2) comprising

at least:

       input means for carrying out a distribution process of image information inputted

through an image input mechanism (Fig.4, "Optical Scanner");

       storing means for storing an image inputted through the input means (Fig.4,

"Database");

       comparing means for comparing an image inputted through the input means with

an image stored in the storing means (Fig.4, "Images Subtraction" of the input images

and Background pattern images); and

       output means for outputting a result of comparison by the comparing means

(Fig.4, output of "Images Subtraction" block after "Position Adjustment" block, and

subsequent blocks),

       wherein the comparing means includes calculating means for calculating a

difference in pixel values which represent pixel densities, between an image newly

inputted through the input means and an image stored in the storing means, and

recognizing means for recognizing a portion common to the stored and newly input

images (note in section 3.2 "Background Elimination" the apparatus calculates a difference between a position-adjusted newly inputted image, $I_{CD}(x,y)$, and a background pattern image, $I_{CB}(x,y)$, stored in the database).

Koerich 1 does not teach that the recognizing means compares an output of a calculating means with a preset threshold value. However, this is well known in the art as evidenced by Koerich 2. Note that Koerich 2 teaches calculating a difference in pixel values between an image inputted through an input means, and an image stored in a storing means. Koerich 2 further teaches recognizing a portion common to the stored and newly input images by comparing the difference to a preset threshold value (see section "Background Pattern Elimination," where a difference between a newly inputted image, $a_n(x,y)$, and a background pattern image, $b_n(x,y)$, stored in the database, is calculated, and compared to a threshold T). Koerich 2 states that this technique tolerates small differences between the two images involved in the background pattern elimination. This would yield improved results. Therefore, it would have been obvious to one of ordinary skill in the art to modify Koerich 1 according to Koerich 2.

Koerich 2 further teaches that the comparing means includes extracting means for causing the output means to output only pixels corresponding to pixels of the stored and newly input images respectively when the difference in pixel values calculated by the calculating means is equal to or less than the threshold value (note in section "Background Pattern Elimination" the equation for $c_n(x,y)$ indicates that when the difference is less than or equal to the threshold value T, $c_n(x,y)$ takes on a value of 1

(i.e., a pixel is output), otherwise, the $c_n(x,y)$ takes on a value of 0 (i.e., no pixel is output)).

With regard to claim 7, Koerich 2 discloses a setting means for allowing a user to set the threshold value (this is inherent. Note in the next to last sentence of the section "Background Pattern Elimination" the reference indicates that T was chosen to be 20. This provides evidence that T is settable by a user, and therefore the system must have some means for allowing T to be set.).

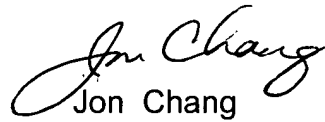### *Allowable Subject Matter*

4.   Claims 3, 5-6, 8-9 are allowed.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon Chang whose telephone number is (703)305-8439. The examiner can normally be reached on M-F 8:00 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

Jon Chang
Primary Examiner
Art Unit 2623

Jon Chang
September 10, 2003